

KIC 004671584

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
004671584-01	OBS	6434.01	2.796651	134.034858	1647.2	3.595	403.2	220.6	1.33	6331	8.17	1801.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004671584-01	OBS	FP	0.00	0	1	1	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—CENT_UNRESOLVED_OFFSET

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

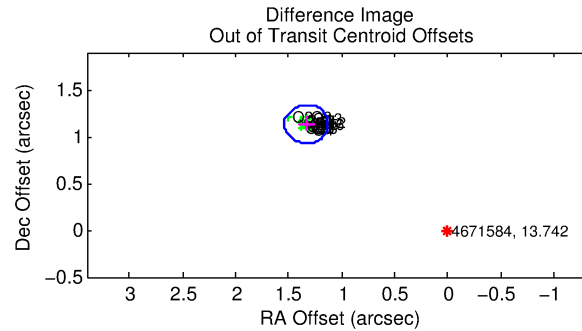
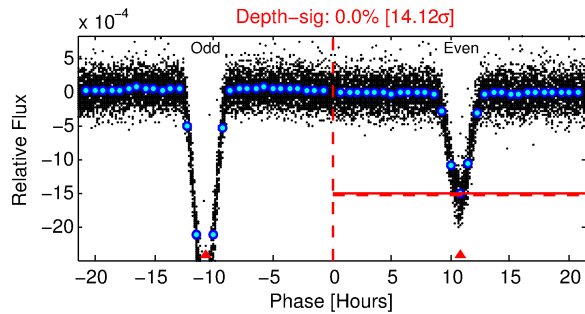
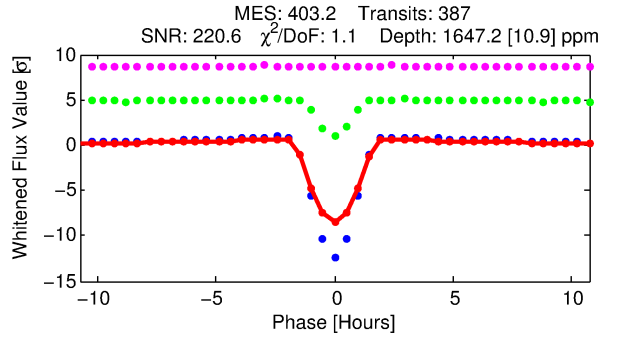
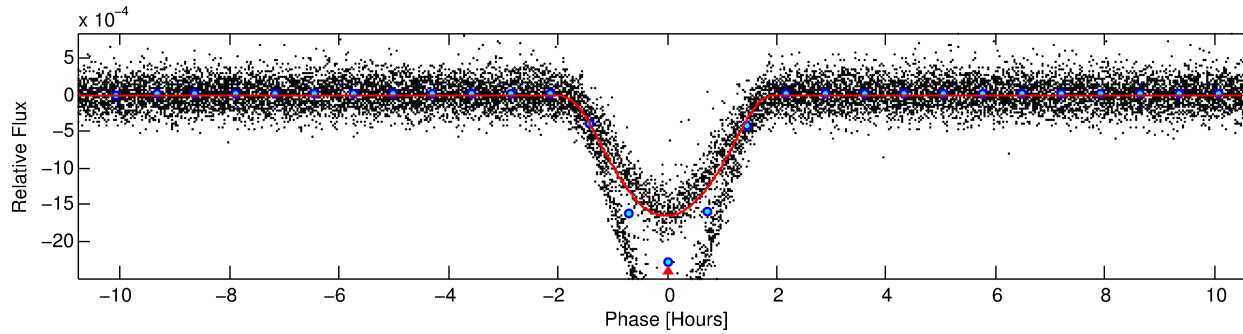
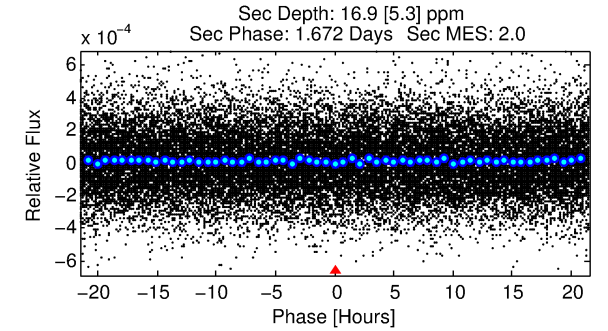
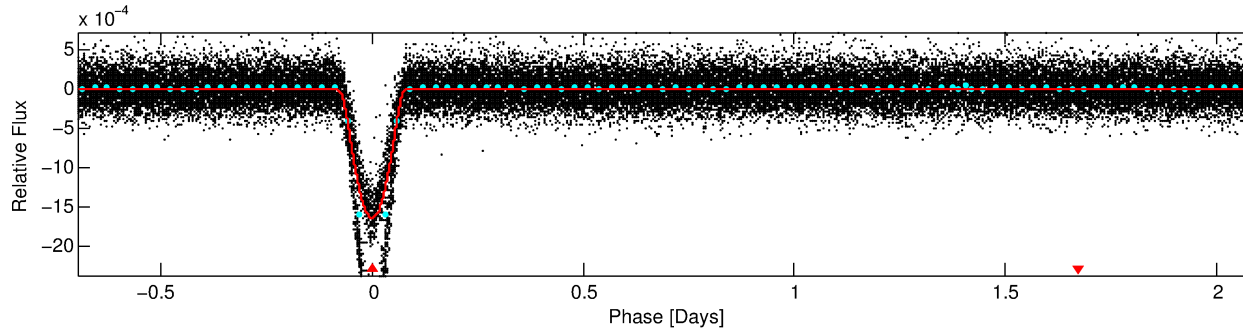
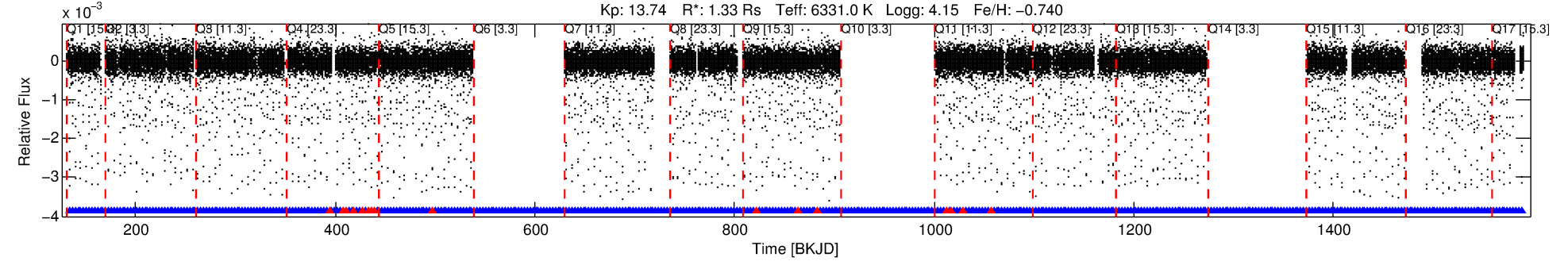
Ephemeris Match Information For 004671584-01

No Significant Match Found

DV One-Page Summary

KIC: 4671584 Candidate: 1 of 1 Period: 2.797 d
KOI: K06434.01 Corr: 0.962

Kp: 13.74 R*: 1.33 Rs Teff: 6331.0 K Logg: 4.15 Fe/H: -0.740



DV Fit Results:

Period = 2.79665 [0.00000] d
Epoch = 134.0349 [0.0003] BKJD
Rp/R* = 0.0564 [0.0041]
a/R* = 2.57 [0.05]
b = 0.98 [0.01]
Seff = 1801.48 [957.28]
Teq = 1661 [221] K
Rp = 8.17 [2.64] Re
a = 0.0375 [0.0118] AU
Ag = 0.20 [0.12] [-6.65σ]
Teffp = 1708 [158] K [0.17σ]

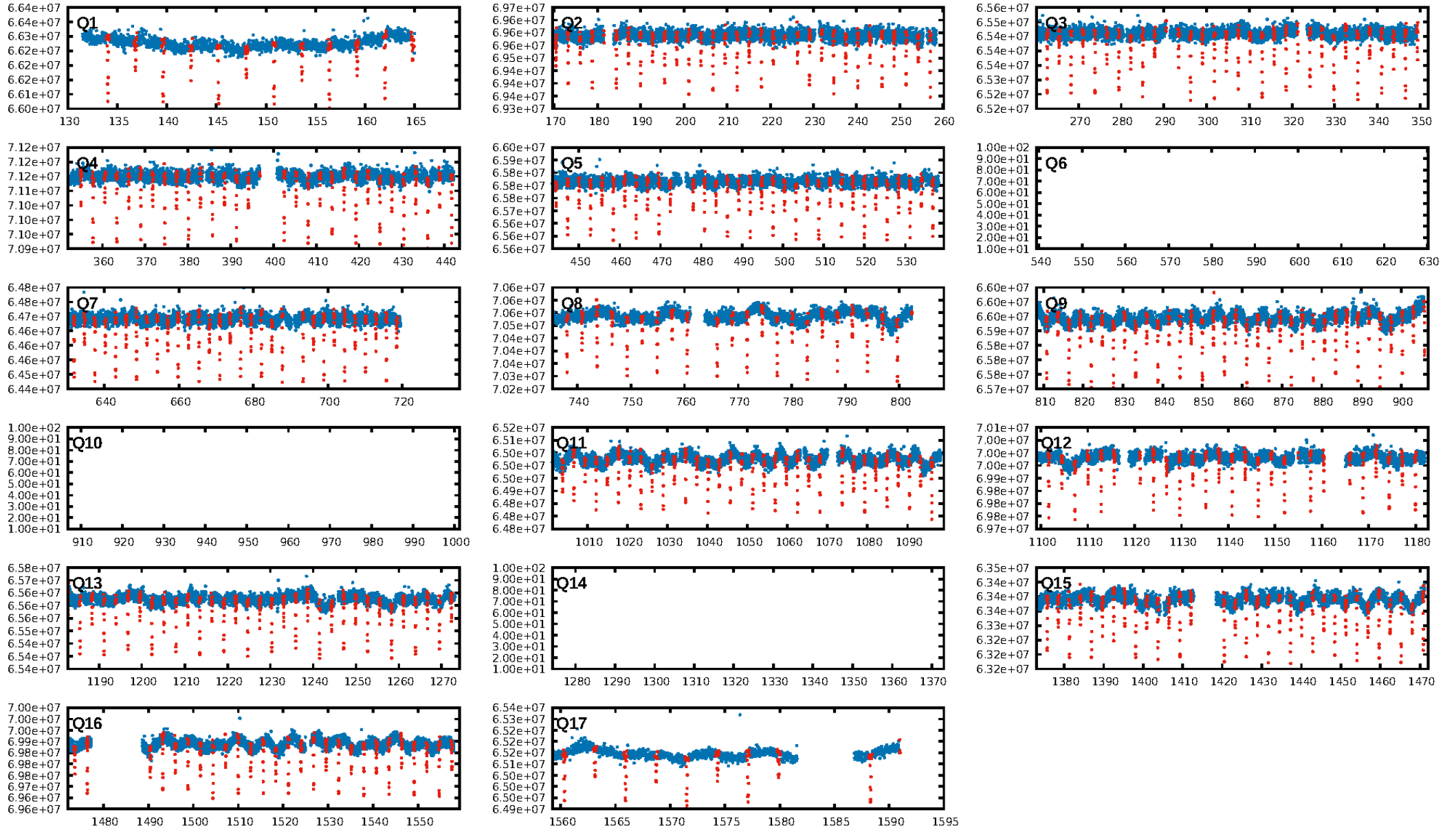
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.96 [350/366]
GhostDiagnostic-chr: 3.377
Centroid-sig: 0.0%
Centroid-so: 1.285 arcsec [27.69σ]
OotOffset-rm: 1.748 arcsec [25.50σ]
KicOffset-rm: 1.544 arcsec [22.69σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

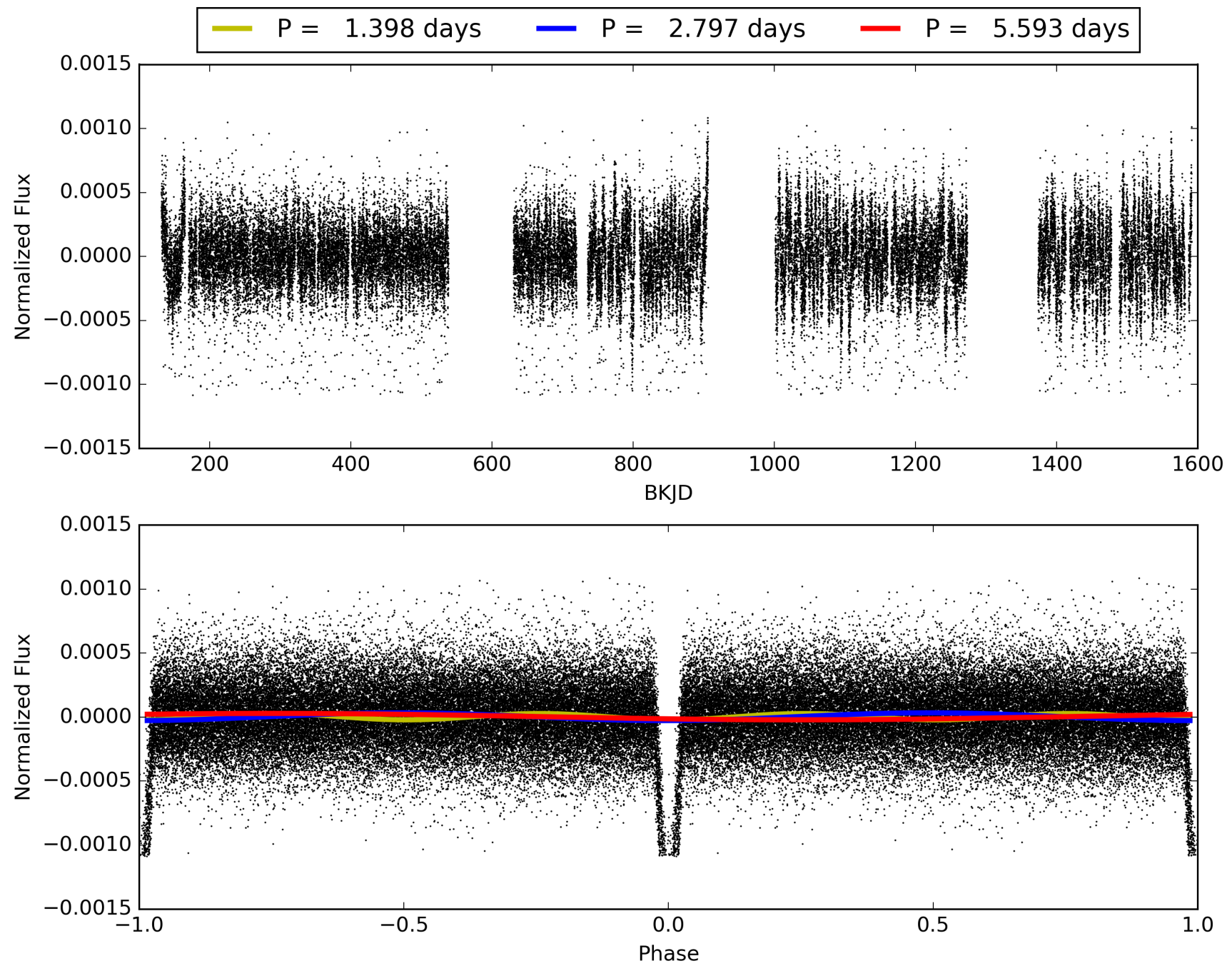
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:52:13 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 004671584-01, PDC Light Curves

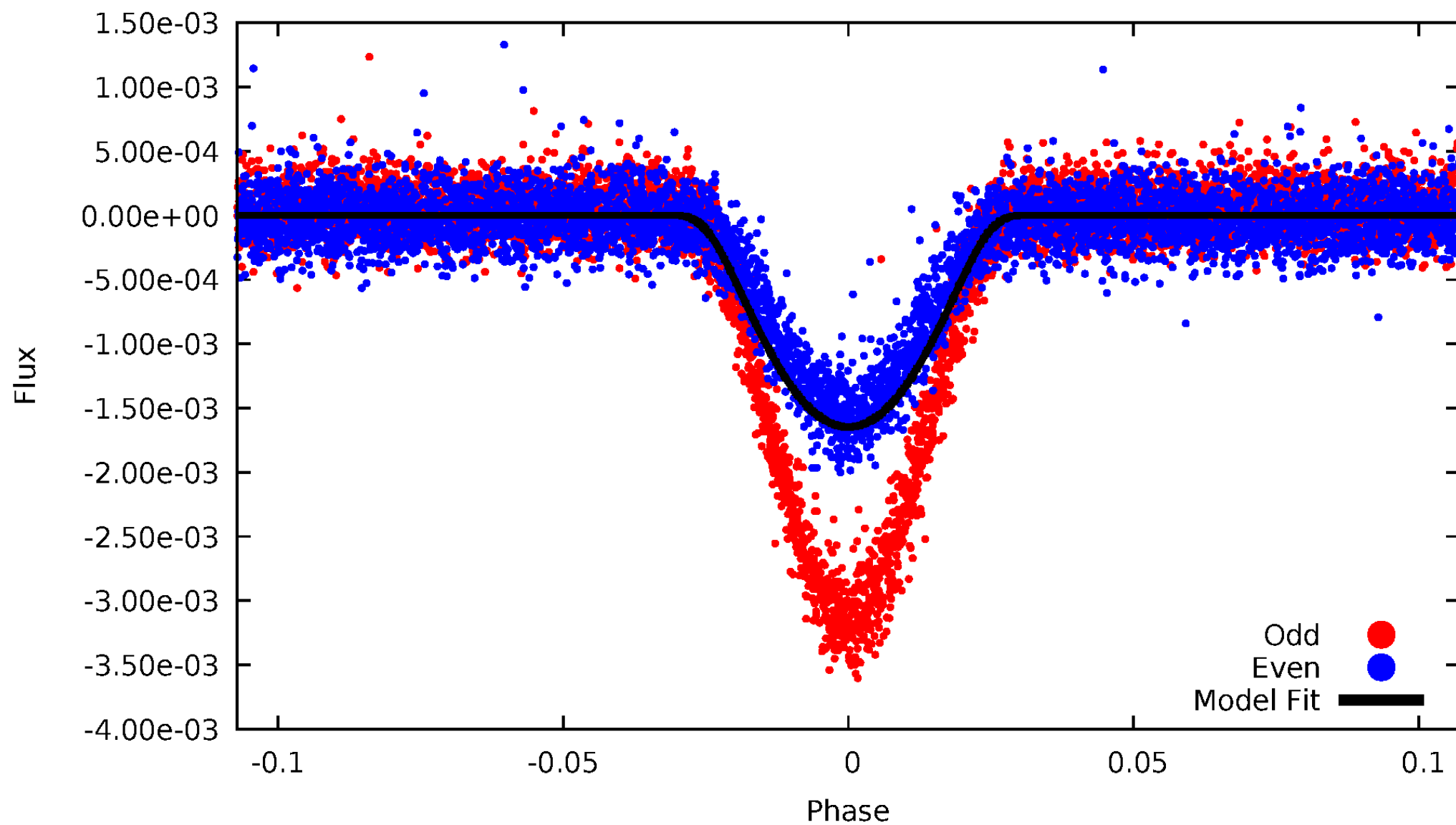


TCE 004671584-01



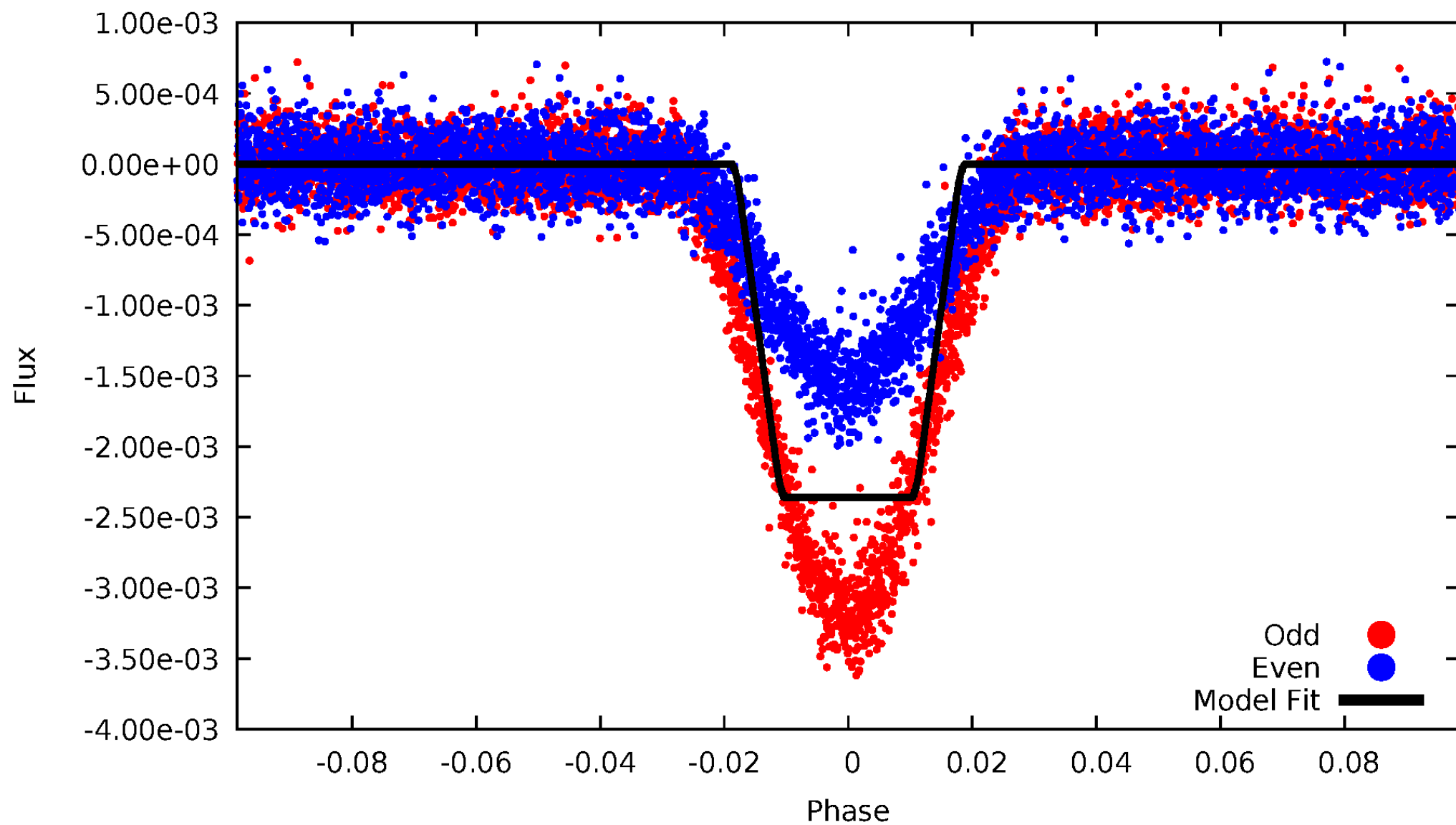
DV Odd/Even

TCE 004671584-01



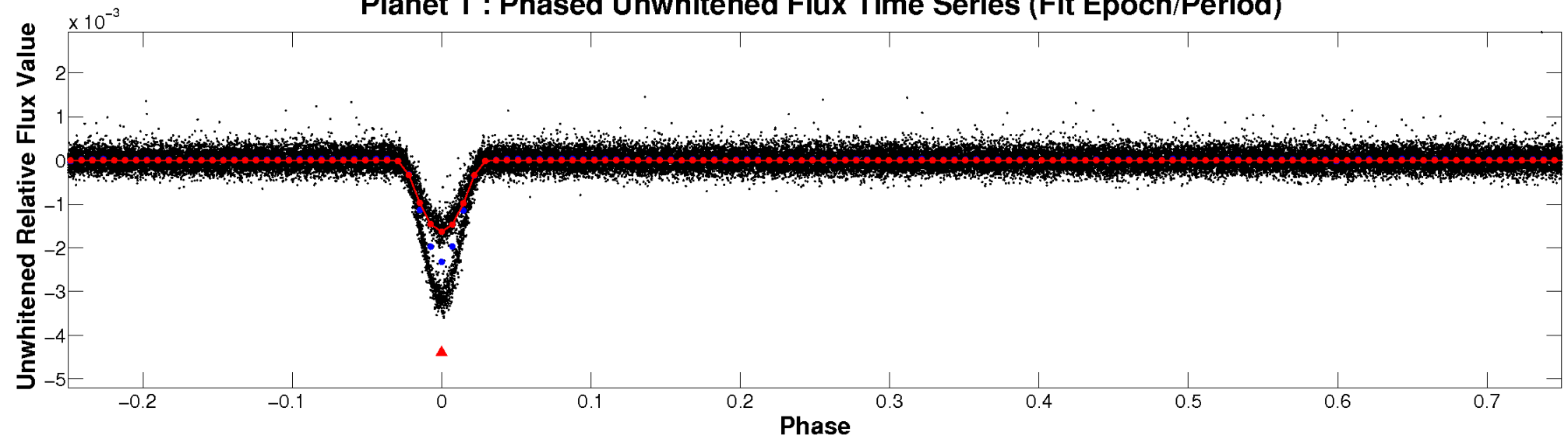
ALT Odd/Even

TCE 004671584-01

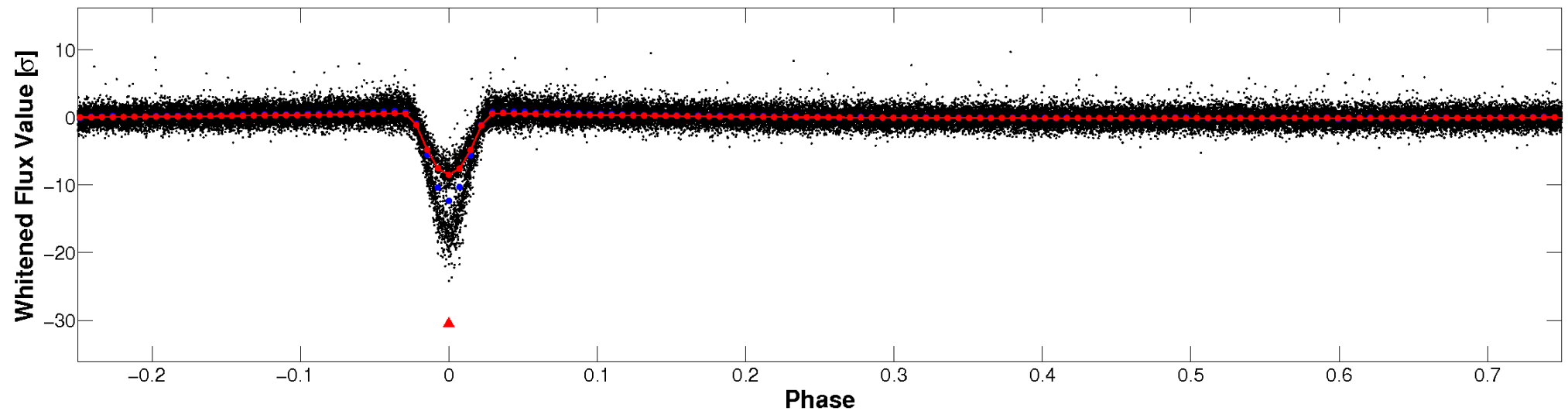


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

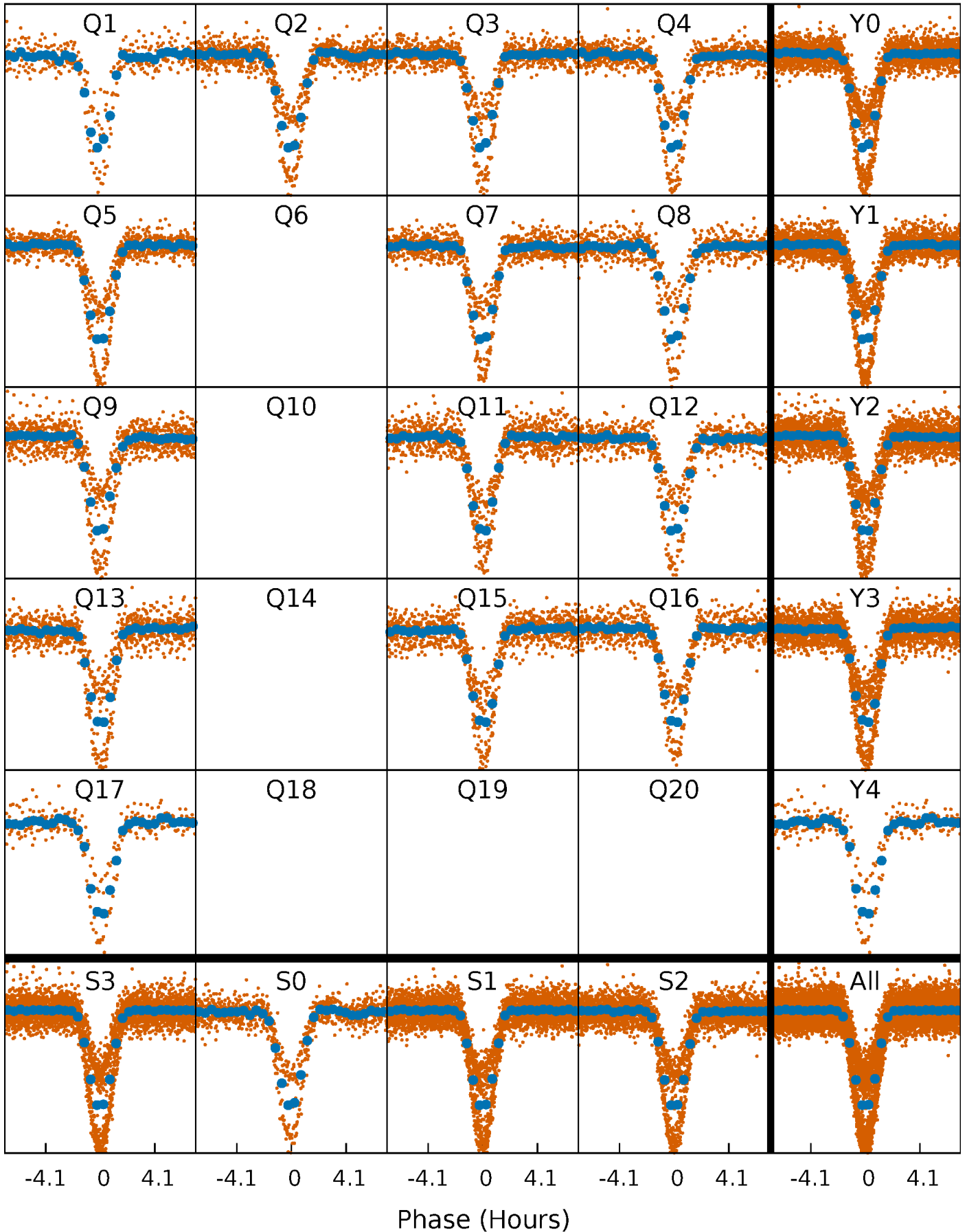


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



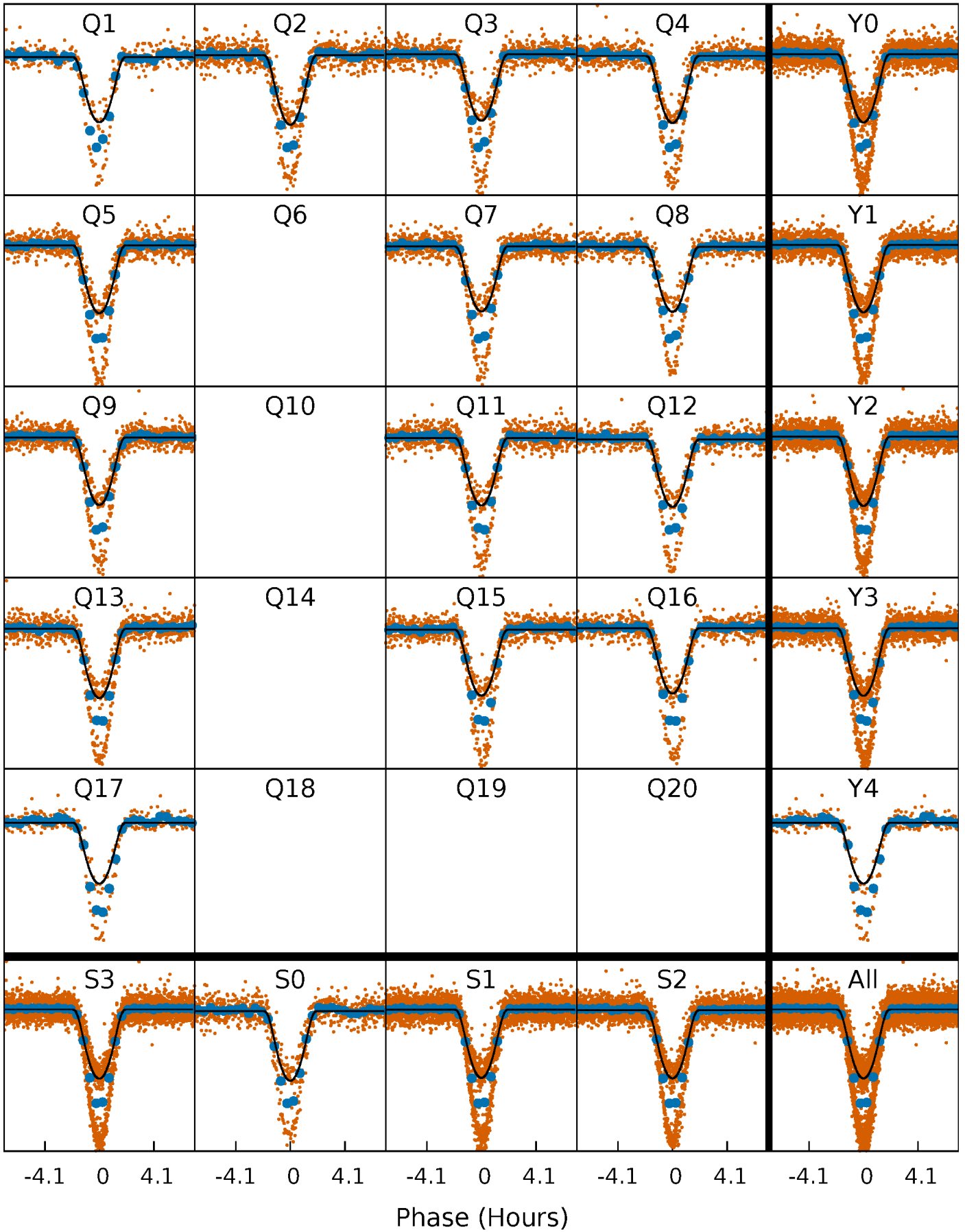
PDC Quarter-Phased Transit Curves

TCE 004671584-01 P= 2.796651 Days $T_0=134.034858$ (BKJD)



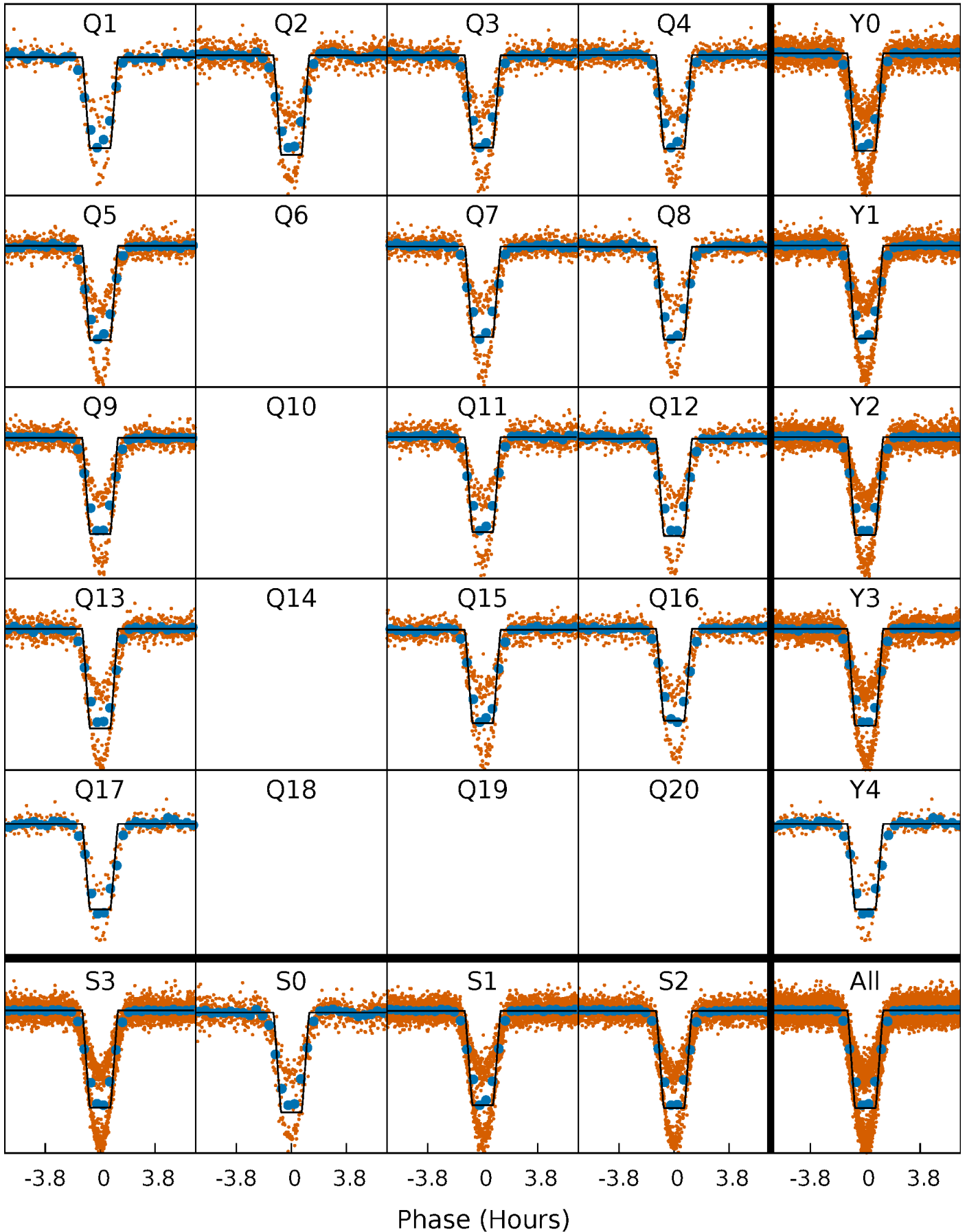
DV Quarter-Phased Transit Curves

TCE 004671584-01 P= 2.796651 Days $T_0=134.034858$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

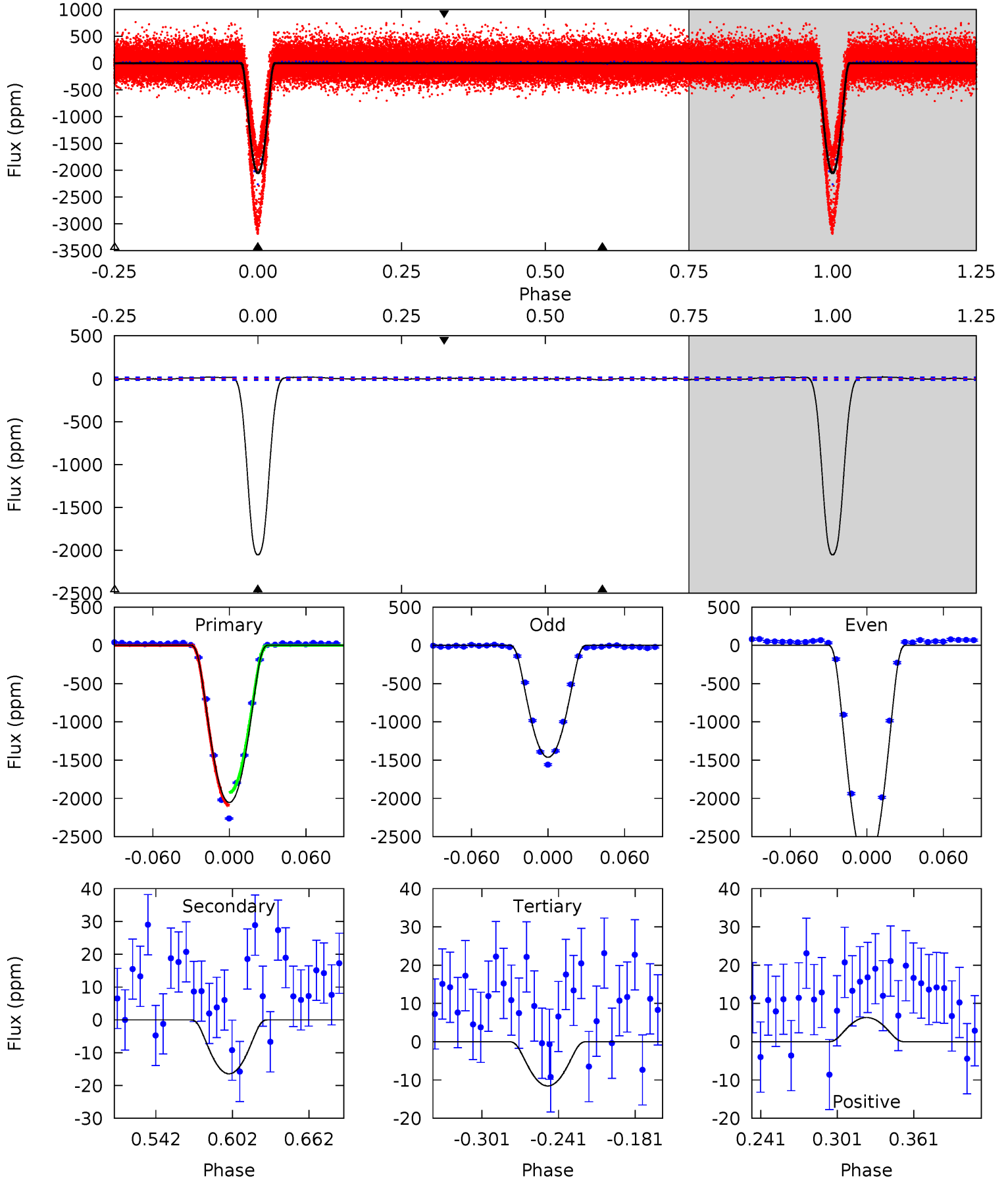
TCE 004671584-01 P= 2.796652 Days $T_0=134.034581$ (BKJD)



DV Model-Shift Uniqueness Test

004671584-01, P = 2.796651 Days, E = 131.238207 Days

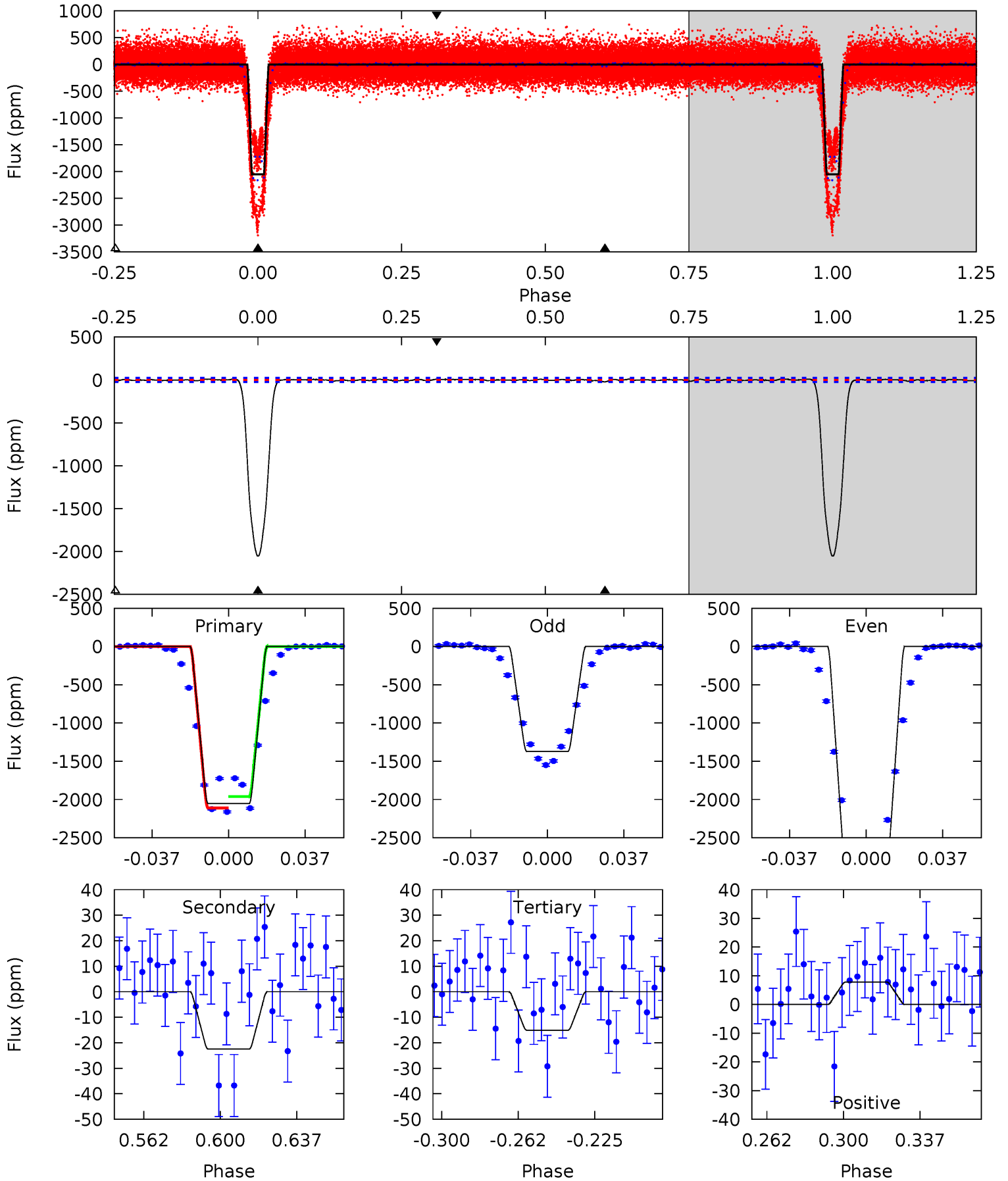
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
593.7	4.76	3.34	1.83	4.67	1.88	2.03	590.4	591.9	1.41	2.93	224.2	0.87	0.01	0



Alt Model-Shift Uniqueness Test

004671584-01, P = 2.796652 Days, E = 131.237929 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
412.7	4.51	3.04	1.57	4.77	2.08	0.99	409.7	411.2	1.47	2.94	179.3	0.85	0.00	0



Stellar Parameters For KIC 004671584

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6331^{+192}_{-211}	$4.146^{+0.306}_{-0.165}$	$-0.740^{+0.300}_{-0.300}$	$1.326^{+0.341}_{-0.417}$	$0.898^{+0.118}_{-0.088}$	$0.542^{+1.031}_{-0.231}$
	+3%/-3%	+7%/-4%	+41%/-41%	+26%/-31%	+13%/-10%	+190%/-43%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 004671584-01 / KOI 6434.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-16 ± 3	$8.02^{+1.42}_{-1.59}$	2296^{+188}_{-220}	-2344^{+4121}_{-213}	$0.198^{+0.112}_{-0.064}$
Alt.	-22 ± 5	$6.97^{+1.21}_{-1.31}$	2298^{+190}_{-213}	2195^{+347}_{-4466}	$0.357^{+0.206}_{-0.124}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

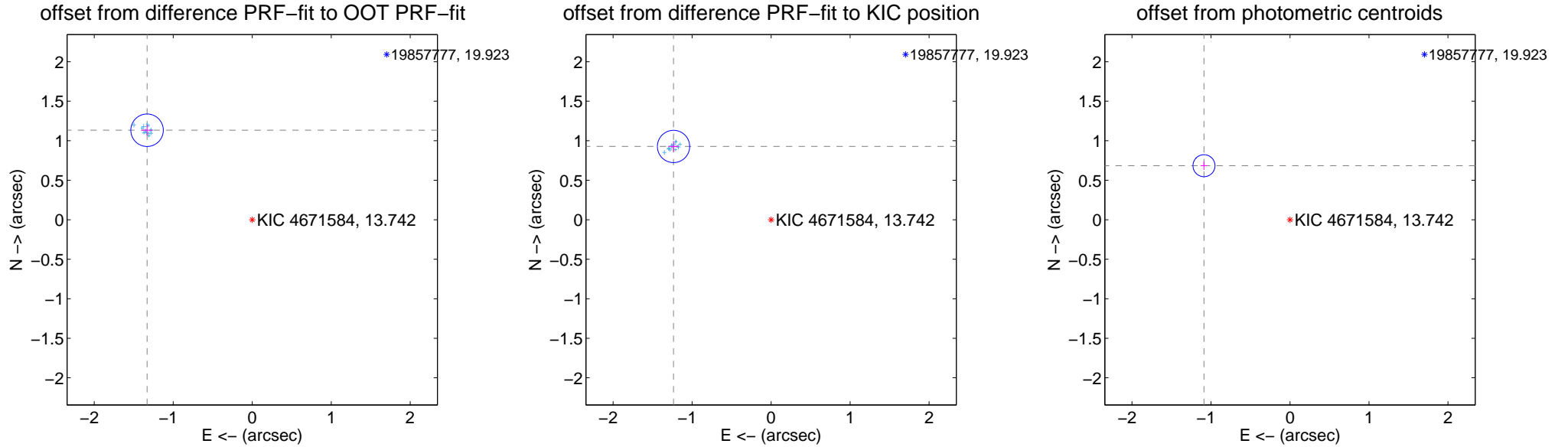
DV Centroid Data

Supplemental centroid analysis for 004671584-01. Kepler magnitude: 13.74. Transit SNR 220.62

There are 14 quarters with good PRF difference image offsets

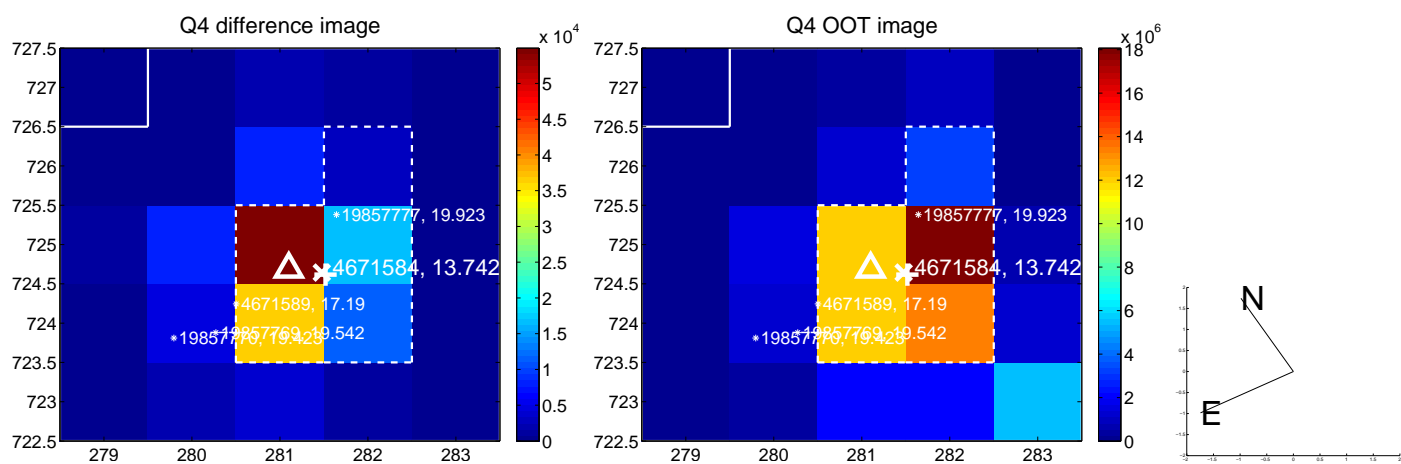
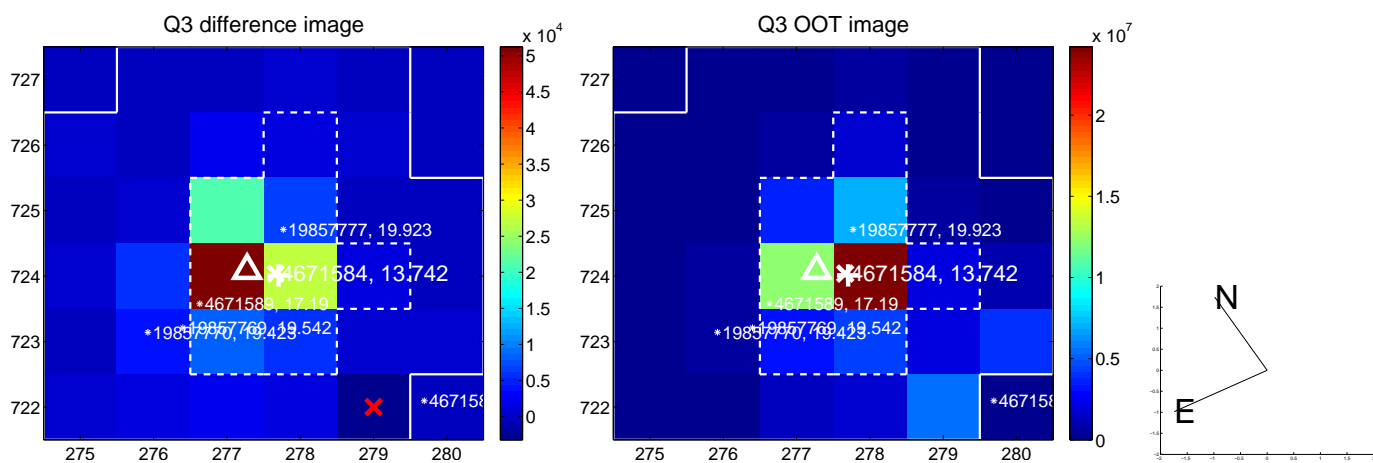
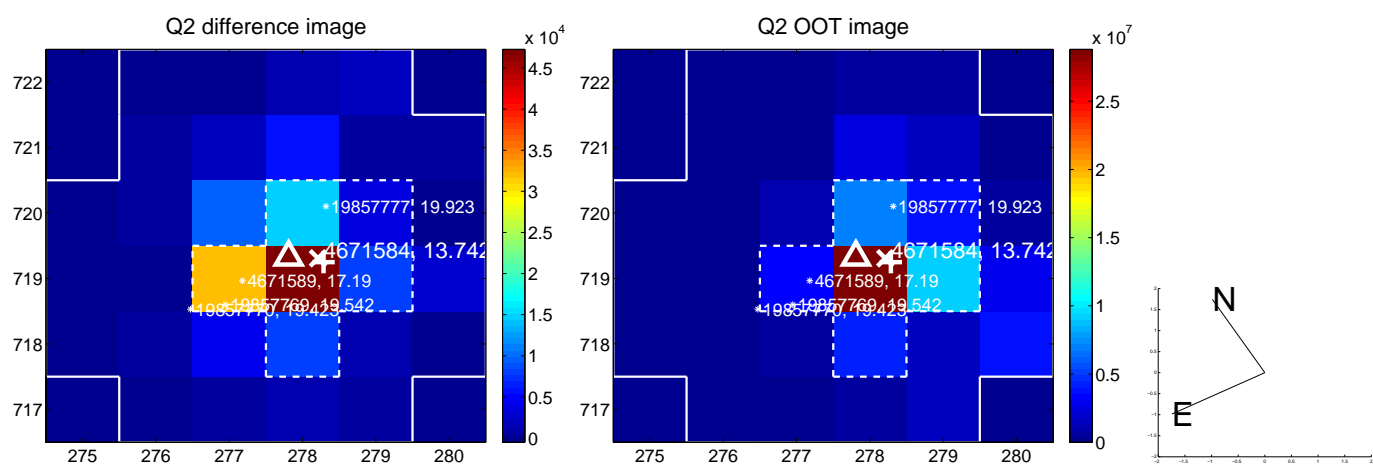
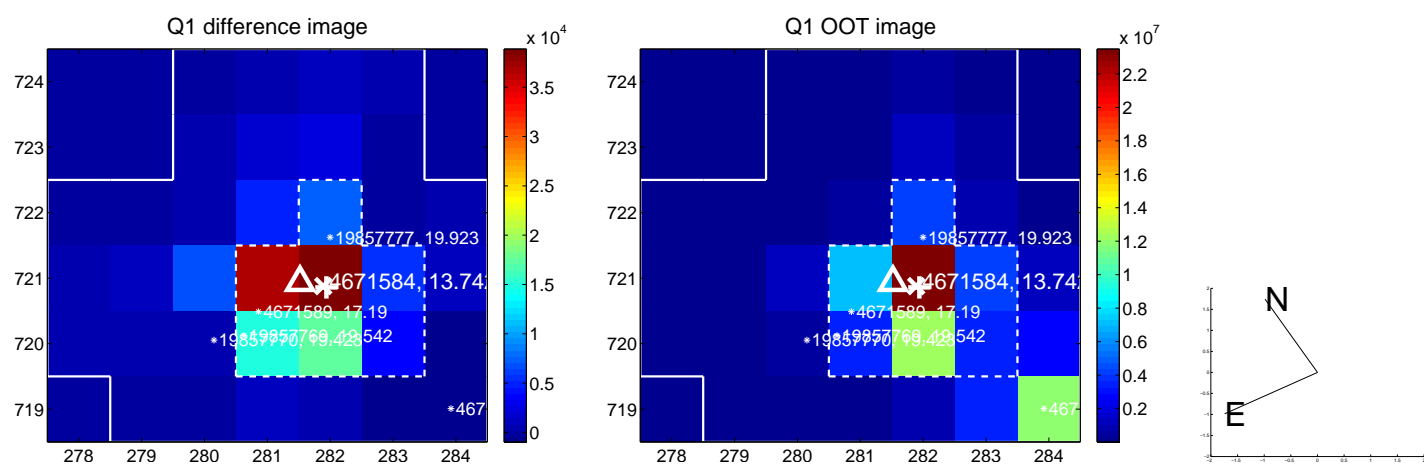
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.748 ± 0.069	25.50	1.331 ± 0.068	1.133 ± 0.068
PRF-fit source offset from KIC position	1.544 ± 0.068	22.69	1.235 ± 0.068	0.927 ± 0.068
photometric centroid source offset	1.29 ± 0.05	27.69	1.09 ± 0.04	0.68 ± 0.05

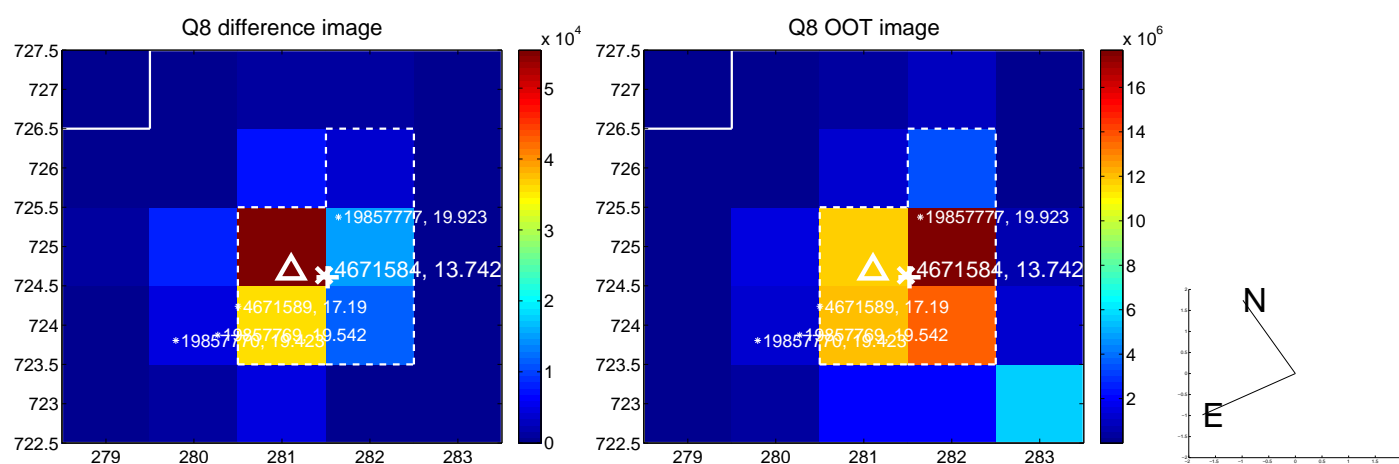
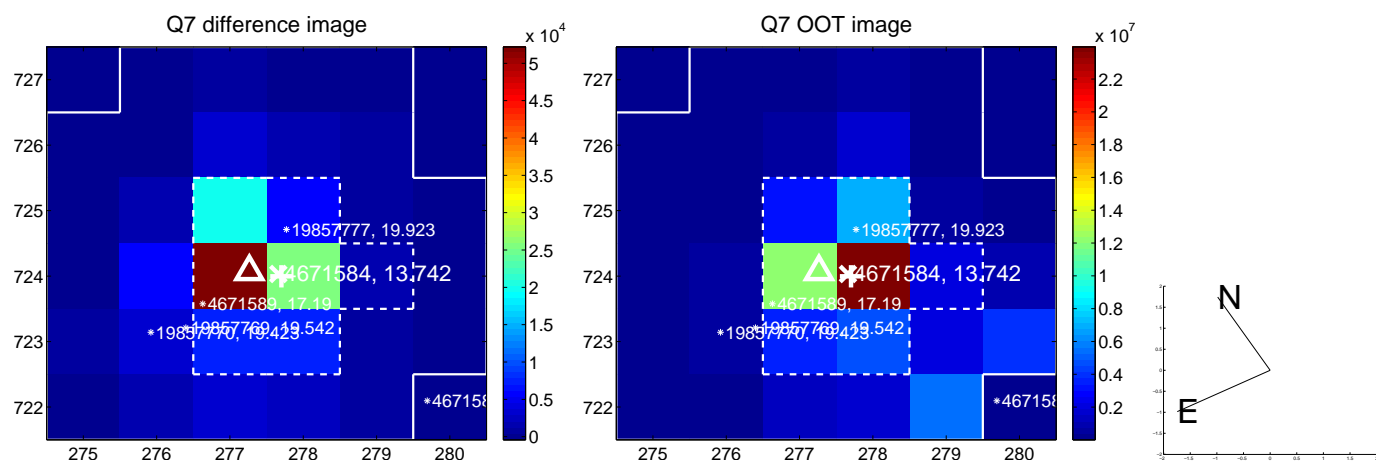
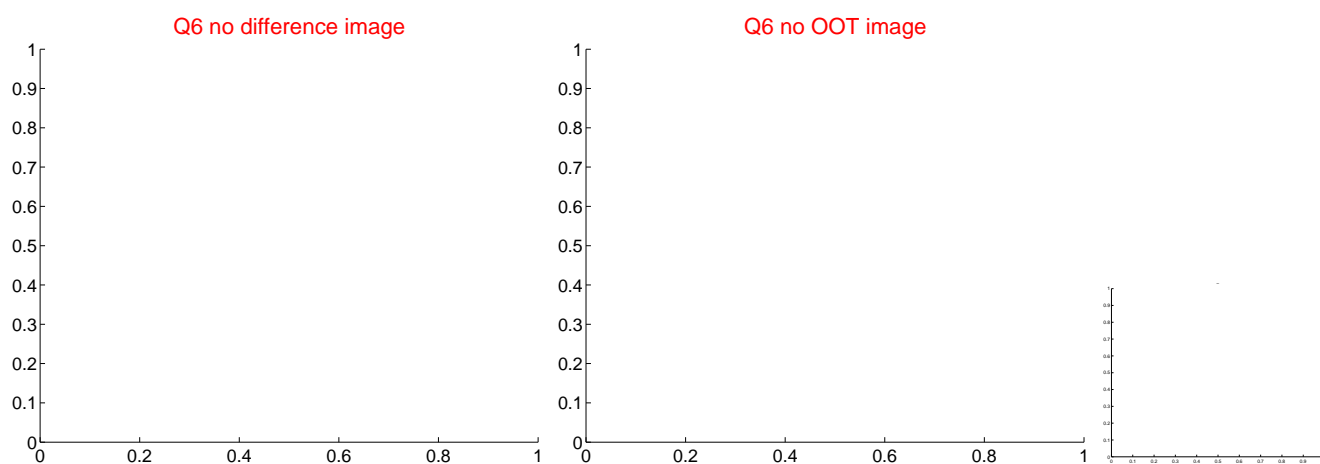
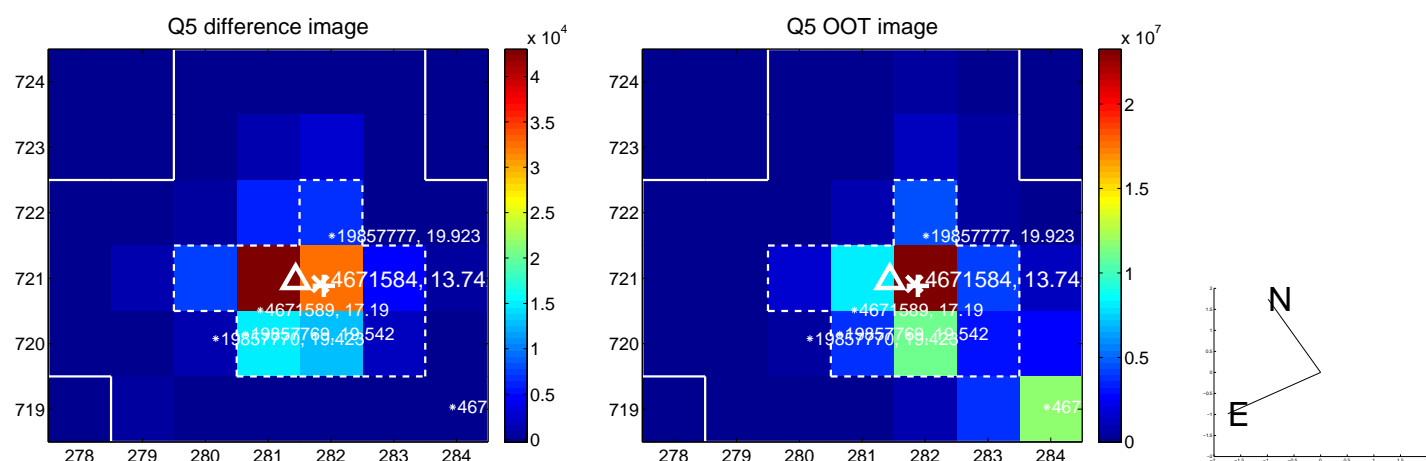


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

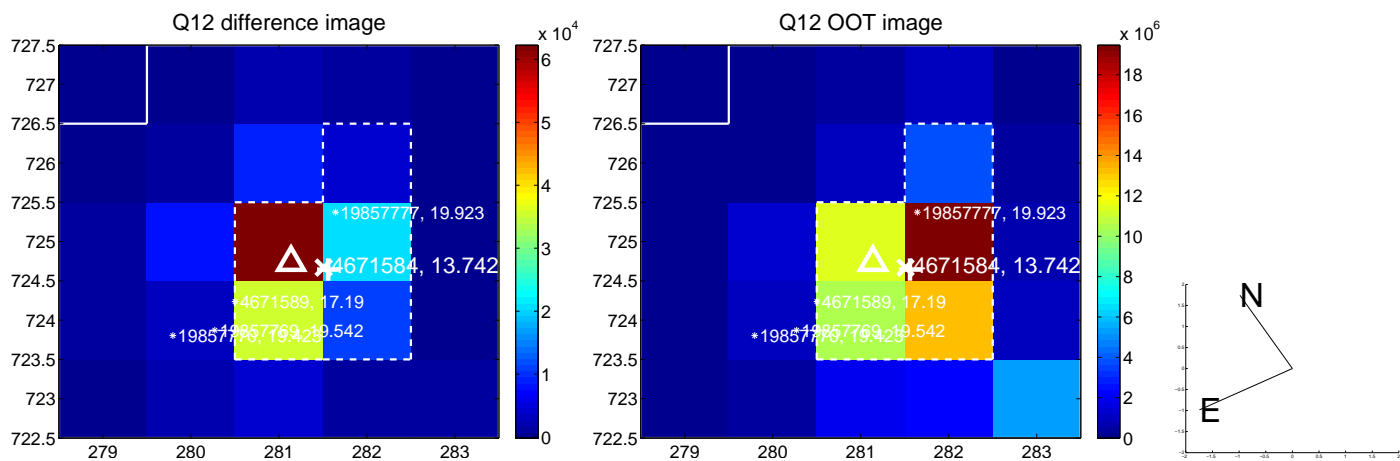
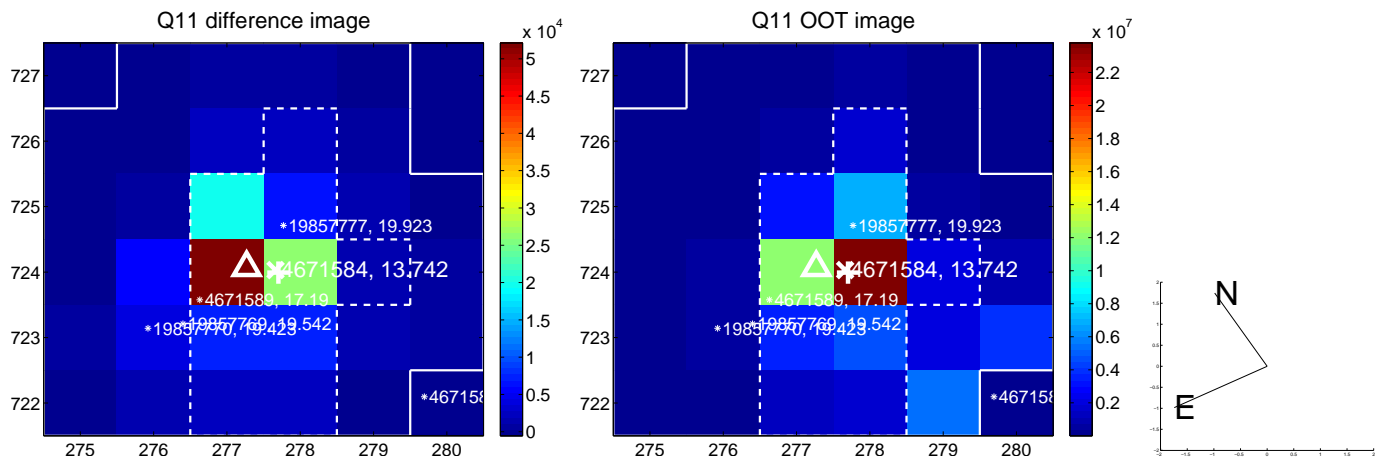
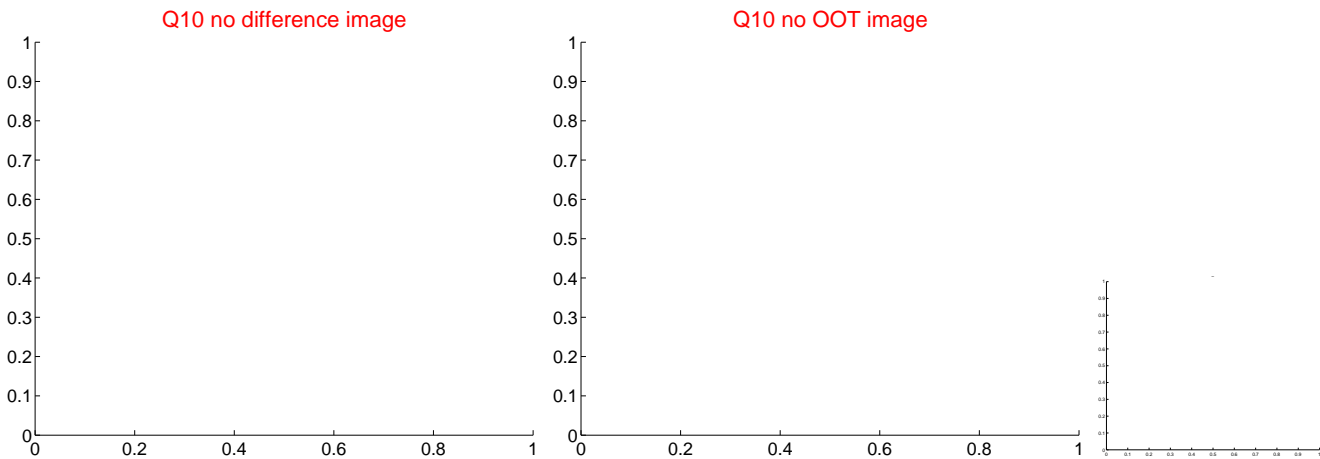
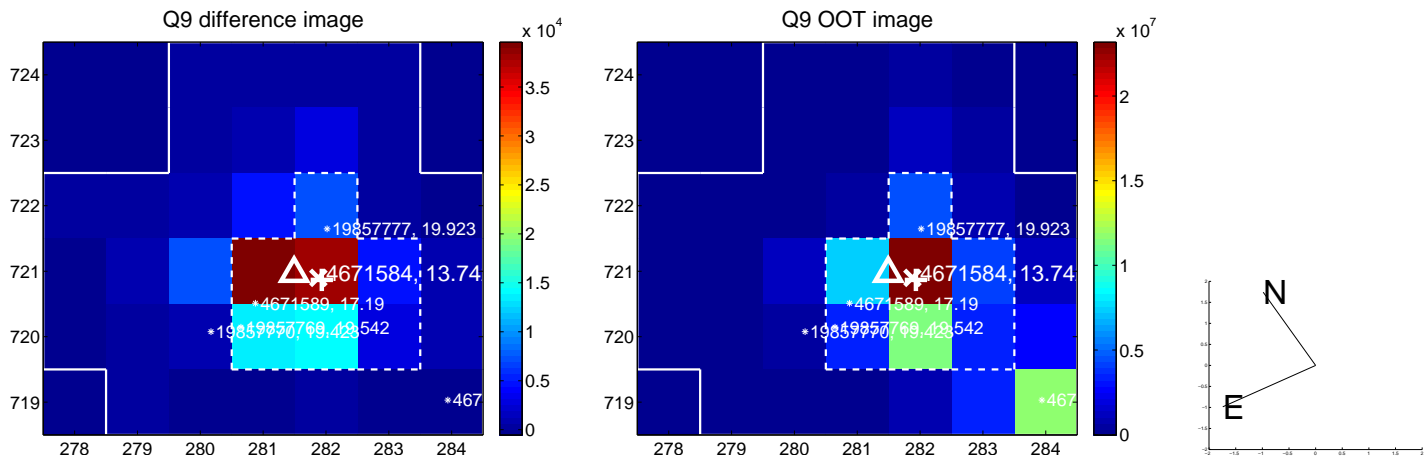
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



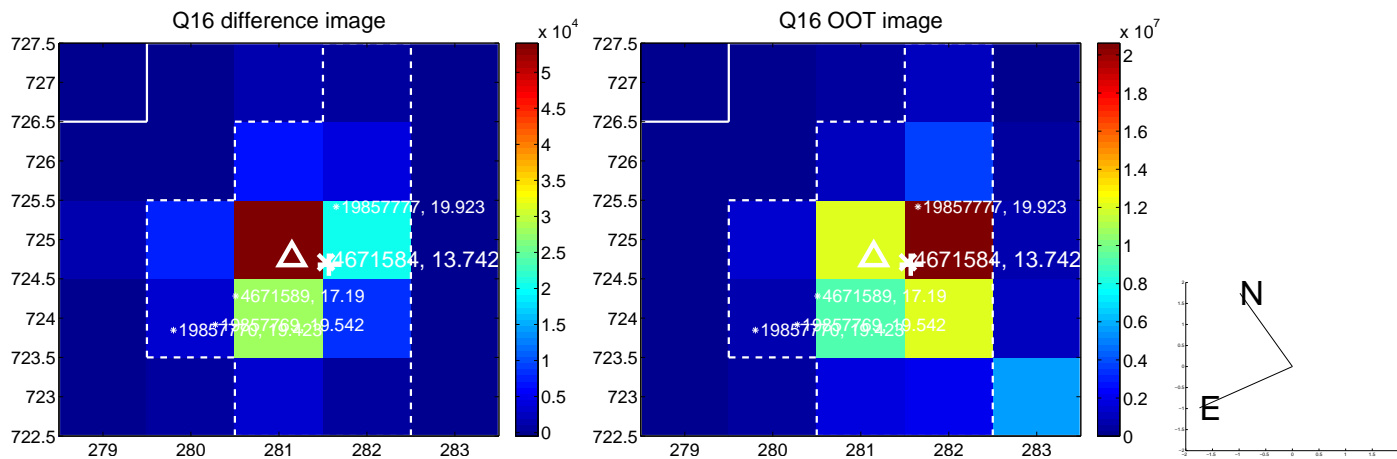
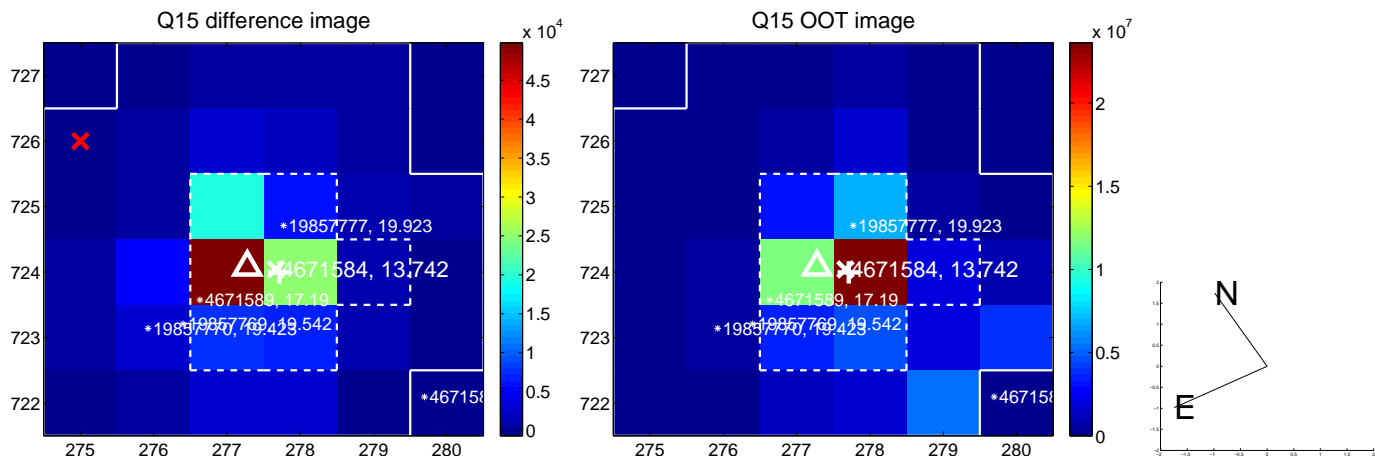
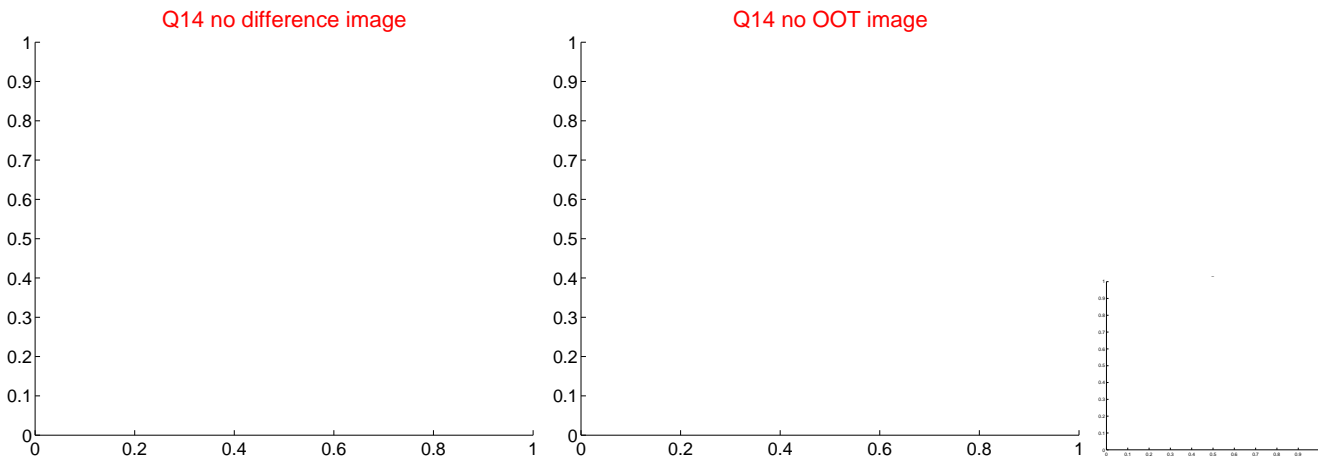
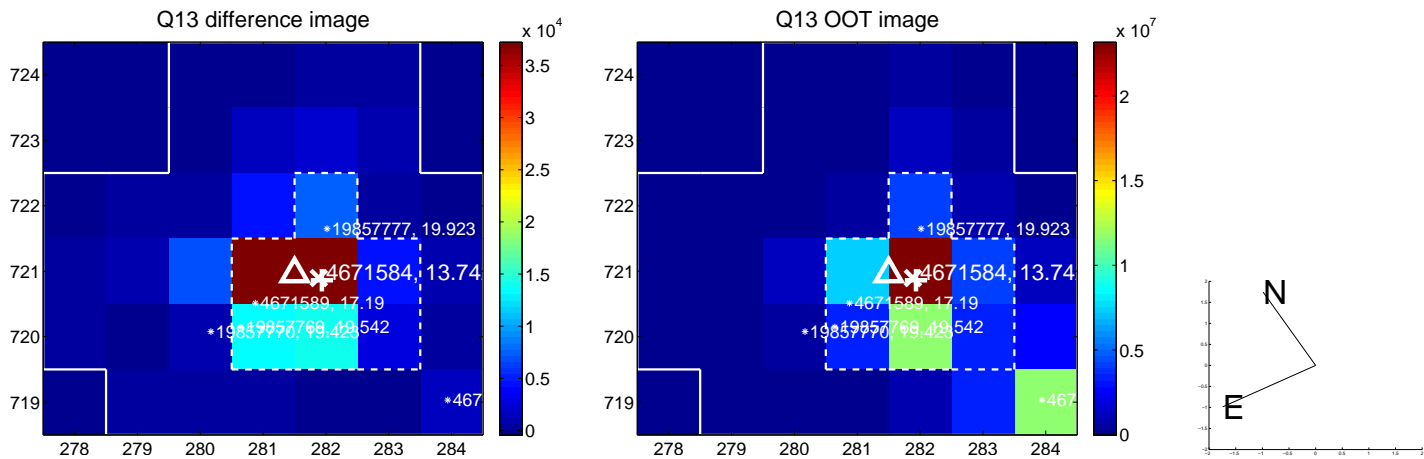
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



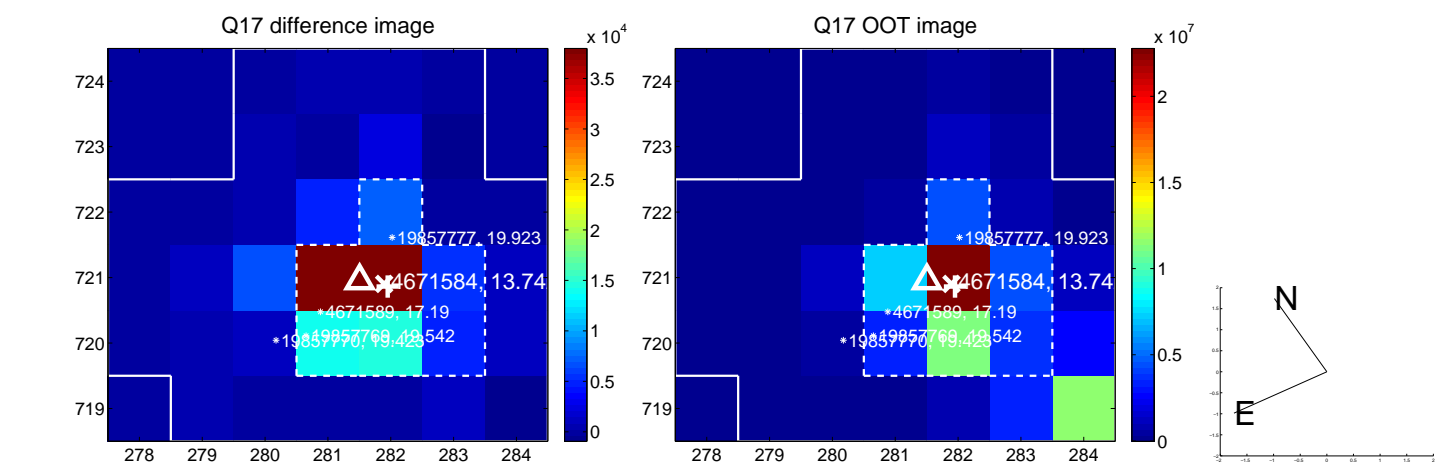
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



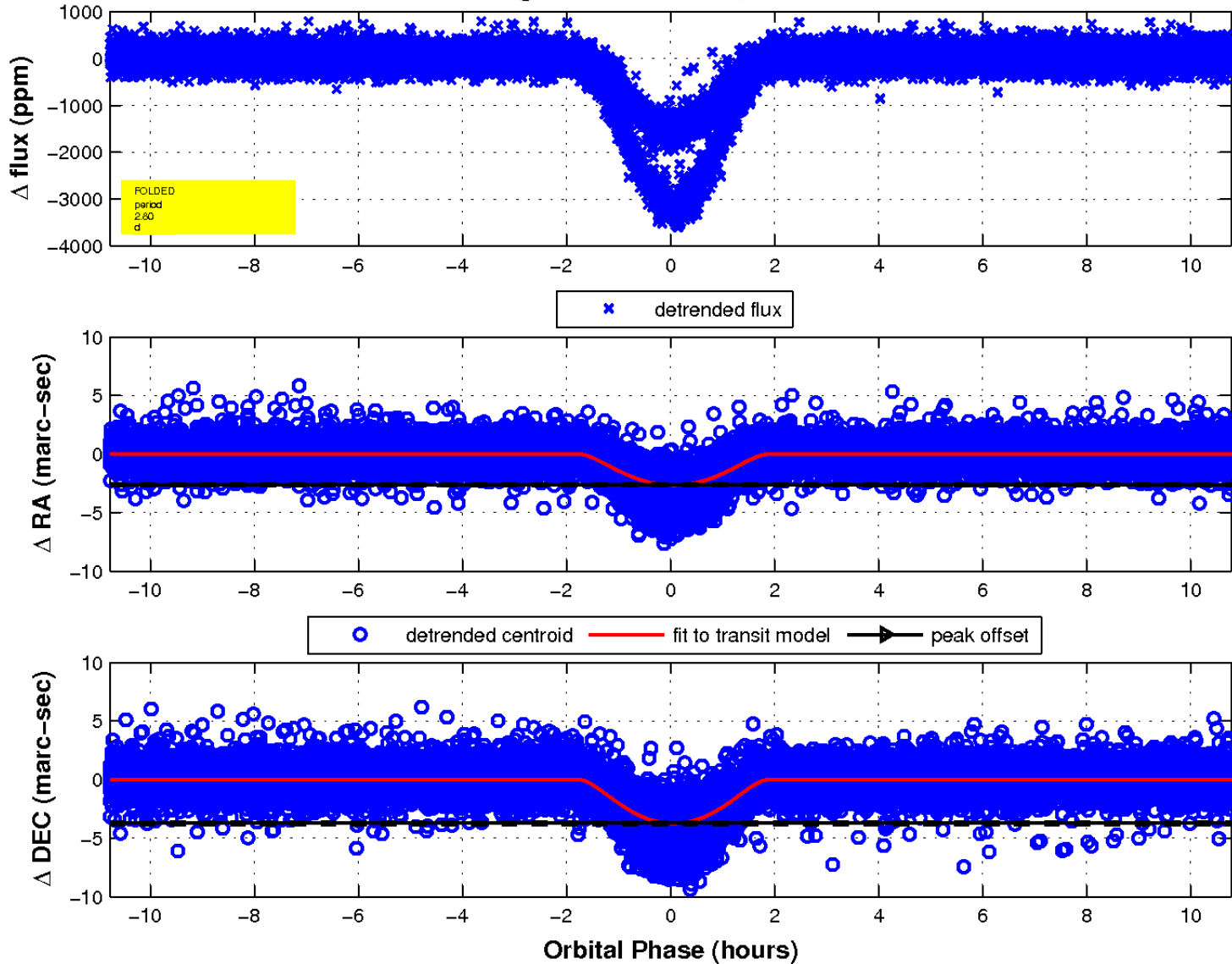
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

